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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,478	09/26/2003	Bertrand Lion	05725.1242-00	7403
22852	7590	08/12/2005		
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			EXAMINER PEZZUTO, HELEN LEE	
			ART UNIT 1713	PAPER NUMBER

DATE MAILED: 08/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/670,478

Applicant(s)

LION ET AL.

Examiner

Helen L. Pezzuto

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-121 is/are pending in the application.
- 4a) Of the above claim(s) 36-71 and 90-121 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-35 and 72-89 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-121 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/26/03, 5/18/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Art Unit: 1713

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I, claims 1-35, 72-89, with the ultimate polymer species in Example 1, in the reply filed on 5/18/05 is acknowledged. The traversal is on the ground(s) that the search and examination of the entire set of 121 claims can be made without serious burden on the office. This is not found persuasive because as clearly sets forth in the restriction requirement, the various inventions are classified in different areas, comprising a large numbers of permutations and species. Accordingly, the examiner's position is maintained.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 36-71, and 90-121 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected inventions, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 5/18/05.

Claims 1-35, and 72-89 are currently under consideration in this application.

Claim Rejections - 35 USC § 112

Art Unit: 1713

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 6, 10, 21, and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 6 and 21, the recited "isobornyl acrylate" and "tert-butyl" does not fall into the definition of "C₄ to C₁₂ cycloalkyl group". Please clarify.

In claims 10 and 29, on the second line from the bottom of the claims, do applicants intend "vinyl" alcohol? Please clarify.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-35, and 72-89 are rejected under 35 U.S.C. 103(a) as being unpatentable over Galleguillos et al. (US-005) or

Art Unit: 1713

Kitayama et al. (US-946) or Frechet et al. (US-855 or US-925) or JP-2002-201244.

US 6,410,005 B1 to Galleguillos et al. discloses AB block copolymer comprising a soft hydrophobic and a hard, hydrophilic blocks with two or more distinct glass transition temperatures, represented by Structures 1 and 2 (col. 4, lines 44-65). Specifically, prior art discloses a process of polymerizing a polyfunctional monomer X within the scope of the instant intermediate segment with a first ethylenically unsaturated monomer(s) to form an A block, and subsequently polymerizing a second ethylenically unsaturated monomer(s) containing at least one carboxylic acid group with the A block to form a B block and the resultant block copolymer (col. 3, lines 53-60; col. 4, lines 18-43; col. 5, lines 2-4; col. 6, line 27 to col. 7, line 57). US-005 teaches average molecular weight of the resultant block copolymer within applicants' range (col. 5, lines 23-29; col. 22, Table 2), having film forming property and water dispersibility (col. 6, lines 3-5). Suitable hydrophobic monomer A includes the various (meth)acrylates, (meth)acrylamides expressed in the present claims, with preferred species such as n-butyl acrylate, ethyl acrylate and 2-ethylhexyl acrylate which read on the

Art Unit: 1713

instant low Tg monomeric species(col. 7, line 65 to col. 9, line 2). Patentees' preferred hydrophilic monomer B include ethylenically unsaturated carboxylic acid such as (meth)acrylic acid, which along with the disclosed alkyl methacrylates, clearly fall within the scope of the instant block having Tg greater than or equal to 40°C (col. 10, line 57 to col. 11, line 30). Prior art specifically disclose using mixtures of A and B monomers so as to achieve the desired balance of the resultant block polymer properties (col. 12, lines 12-15).

US 6,228,946 B1 to kitayama et al. discloses a block copolymer, wherein block B has a Tg of 20°C or less, and a block C composed mainly of a methacrylate ester and/or an acrylate ester unit having a Tg exceeding 20°C (abstract; col. 3, lines 48-56), thus, meeting the Tg requirements of the present block copolymer. Suitable blocks B and C monomers include the various methacrylate and acrylates expressed in the present claims (col. 4, lines 1-56). Patentees disclose number average molecular weight within applicants' range, and a molecular weight distribution of up to 2.0, which abuts applicants' value (col. 5, lines 44-51).

Art Unit: 1713

US 6,663,855 B2 and US 6,685,925 B2, both to Frechet et al. (reference will be made with respect to US-855) discloses a block copolymer comprising a core polymer and two or more flanking polymers, wherein at least one of the flanking polymers is a copolymer derived from two or more monomers (abstract). Specifically, prior art block copolymer may have the linear structure of $(AB)_n$ -Core, wherein at least one of blocks A and B comprises two or more monomers is hydrophobic and hydrophilic. Typically, component A is a hard block having a high Tg (i.e. preferably from 30 to 150°C), and component B is a soft block having a low Tg (i.e. preferably from 175 to less than 30°C) (col. 3, line 66 to col. 4, line 36). The respective monomer components made up the core and flanking polymers are selected to produce a block polymer with balanced hydrophilic/hydrophobic characteristic (col. 4, lines 55-57). Prior art discloses Mn and Mw of the respective core and flanking polymers within the claimed range. A molar ratio of the core polymer to the flanking polymer from 1:10 to 10:1 is further suggested (col. 5, lines 1-15). Suitable monomers for the core and flanking

Art Unit: 1713

polymers are taught within the scope of the present claims (col. 7, line 6 to col. 9, line 49).

JP-2002-201244 (computer translated copy hereby provided) discloses an acrylic block copolymer having a Tg difference of between 130-200°C. Prior art discloses and exemplifies acrylic monomers, producing block with Tg less than -20°C and those of Tg of at least 70°C ([0034]). Prior art discloses weight average molecular weight and Mw/Mn in applicants' range ([0036], Table 1).

Prior art discussed above provide clear disclosures regarding the method and the selection of various monomers species in formation block copolymer systems having balance of hydrophilic/hydrophobic properties. The selection of hard and soft block components with differences in glass transition temperature is suggested within the scope of the present claims. Accordingly, one skilled in the art would have readily envisaged the selection of the suitable monomers having Tg differences as taught, motivated by the reasonable expectation of success in forming block copolymers with balanced hydrophilic/hydrophobic characteristics. Once the respective monomer block components are suggested with Tg consideration, the

Art Unit: 1713

determination of their optimum proportion or workable ranges would involve only routine skill in the art. Thus, rendering obvious the present claims.

Double Patenting

7. Claims 1-35, and 72-89 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-101 of copending Application No. 10/670,388. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant block copolymer is encompassed by the identical block copolymer in the copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

8. Claims 1-35, and 72-89 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 4-31, and 43-102 of copending Application No. 11/089,210. Although the conflicting claims are not identical, they are not patentably distinct from each other because instant block copolymer is encompassed by the identical block copolymer in the copending application.

Art Unit: 1713

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

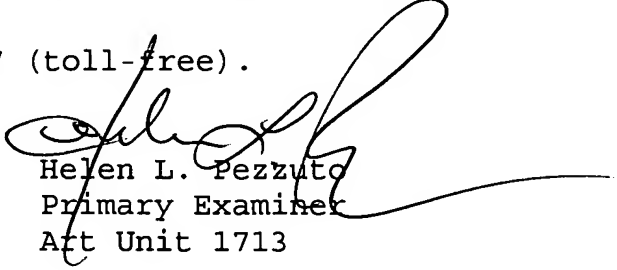
Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen L. Pezzuto whose telephone number is (571) 272-1108. The examiner can normally be reached on 8 AM to 4 PM, Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1713

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Helen L. Pezzuto
Primary Examiner
Art Unit 1713

hlp